Inside Wallops

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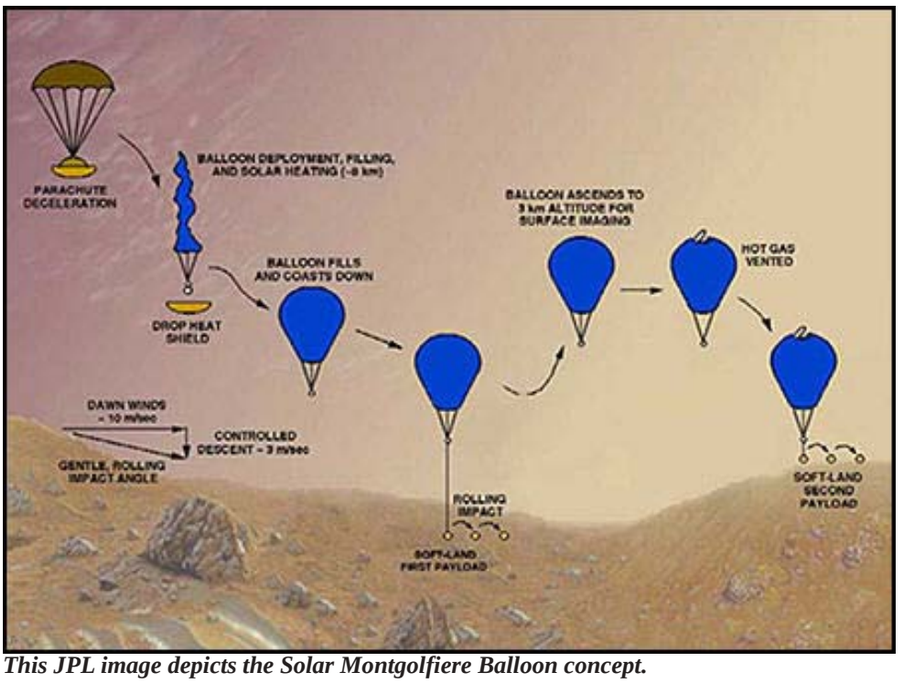
NASA Balloons Floating through the Martian Air

Balloons provide a unique aerial platform for scientific observation. Balloons can fly one hundred times closer to the surface of Mars than orbiters and can travel a thousand times further than rovers in a comparable period, providing views of much broader areas of the Martian surface.

Solar Montgolfiere balloon, named after the French brothers who flew the first hot air balloon. It does not have to be inflated with a light gas such as helium.

An opening at the bottom of the balloon would fill up with Martian "air" while



This JPL image depicts the Solar Montgolfiere Balloon concept.

Balloons have been flying for decades in Earth's stratosphere, which has an atmosphere as thin as that on the surface of Mars.

NASA Headquarters has selected two proposals, of which the Wallops Flight Facility's Balloon Program Office is a partner, that will allow balloon technology to be applied to exploration of Mars.

The Mars balloon would deploy soon after a spacecraft enters the Mars atmosphere and would be rapidly inflated from a helium tank as the payload descends beneath a parachute. After inflation is complete, the parachute and tanks would detach and the balloon would fly at a nearly constant altitude both day and night. Strong, lightweight, leak-proof materials are under development to permit large payloads to be flown on such a balloon.

Tests of balloon deployment in the Earth's atmosphere are currently underway as well.

Another kind of lightweight balloon that may be useful on Mars is called a falling to the surface. The Montgolfiere balloon can play two important roles in exploration:

- The balloon would provide a soft, slow landing for small payloads on potentially hazardous terrain, with greater control than a parachute-assisted or rocket landing system.

- Once the Montgolfiere drops its payload, the balloon could go back up into the atmosphere with a small gondola that would perform imaging and gather other science for the rest of the day. These images would show greater detail than orbiters far above the surface.

The Mars Helium Superpressure Balloon and Mars Montgolfiere Balloon effort will include materials testing as well as balloon fabrication and stratospheric flight testing.

The joint effort between NASA Wallops Flight Facility; the Jet Propulsion Laboratory, Pasadena, Calif.; and Global Solutions for Science and Learning, Inc., (GSSL), Tillamook, Ore., has been funded for a period of three years.

Wallops Shorts……..

Launches

A NASA Terrier-Black Brant sounding rocket was launched from the White Sands Missile Range, N.M., on June 1. The mission was to measure the far ultraviolet emission from hot gasses behind the shock generated by the Cygnus supernova. Good science data was received. The Aeroject Mark VID attitude control system pointed to within 0.5 arc minutes of the target. Recovery operations are in progress. Dr. Erik Wilkinson and Dr. James Green, University of Colorado, were the co-principal investigators. The mission manager was Bill Payne, NASA Sounding Rocket Operations Contract, (NSROC).

A NASA scientific balloon was launched from Ft. Sumner, N.M., on May 31. The 39.57 million cubic foot balloon carried the International Focusing Optics Collaboration for Micro-Crab Sensitivity (InFOCuS) instrument. The InFOCuS telescope's elevation drive did not work during the flight for reasons unknown at this time. In the absence of elevation control, the scientist took background data throughout the day and opted to terminate the flight prior to sunset. Dr. Jack Tueller, NASA Goddard Space Flight Center, was the principal investigator. Total flight time was 9 hours, 28 minutes. The payload has been recovered.

Bradley and Hayne Retire

Frederick (Pat) Bradley retired effective May 31 with 42 years of government service. Bradley was an electronics technician in the Electrical Systems Branch, NASA Wallops Flight Facility.

Photo by James Mason-Foley

George Hayne, (above), a mathematician in NASA WFF's Observational Science Branch retired effective May 31. Hayne began his government service in September 1980.

Tools for Money Management Understanding Mutual Funds

with Gail Ludwig, Financial Advisor
The Medallion Group, Salisbury, MD
June 9, 11:30 a.m. -12:30 p.m.
Brown Bag Seminar
Bring your own lunch!
Williamsburg Room
E-2 Cafeteria Building

On the Road

Keith Koehler, NASA Public Affairs Office and Chuck Brodell, NASA Education Flight Projects Office staffed an exhibit at the American Rocket Challenge on May 22 in The Plains, Va. About 700 students, teachers, advisors, parents and general public attended the event.

Ed Parrott, Teacher-on-Loan, spoke to 5th grade students at Pocomoke Middle School on science and rocketry and launched bottle rockets built by the students.

Who: Cynthia Howard, RN, CNC, PhD
What: Women of Wallops Day
When: Tuesday, June 15
Where: E-2 Training Room for morning and afternoon sessions
E-2 Williamsburg Room for luncheon

Enjoy one, two, or three sessions!

Morning session (9 - 11 a.m.)
Luncheon (11:30 a.m. - 12:30 p.m.)
Afternoon session (1:30 - 3:30 p.m.)

9 to 11 a.m. - Energy Psychology: A heart-centered approach for stress relief and elimination of negative beliefs through creative visuals, tappery, and chakra balancing

11:30 a.m. to 12:45 p.m. - Alternative, Holistic Therapies to Improve Your Energy and Health

1:30 to 3:30 p.m. - Is Your Glass Half Empty or Half Full? How your beliefs create your reality and the life you really want.

Training requests may be required for the morning and afternoon sessions.

Tickets for the luncheon are available from the Wallops Exchange Store in Building E-2 or from Lucille Fox in Building F-6.

H-E-L-P Responds Quickly

The Wallops Institutional Consolidated Contract (WICC) tracks all "safety related" work orders placed through the H-E-L-P desk. These include but are not limited to such items as exposed electrical wires, ceiling tiles falling, trip hazards caused by loose stair treads and broken tiles, inadequate lighting or emergency signs and lights out. Work orders normally performed by WICC also include trouble calls and minor corrective maintenance.

A safety work order promotion and awareness campaign was initiated by the WICC contractor, (The Cube Corporation), to quantify the number of facility "safety related" trouble calls to determine if safety related issues are being corrected or if they are being deferred for future projects.

The trouble call system is for minor repairs and corrective actions that usually do not require more than $1,200 to repair.

If the problem cannot be corrected, a larger repair work order may be developed by the HELP desk that typically does not exceed $1200 to $5,000 depending on the safety risks associated.

Larger more significant projects would be deferred for either a Center funded or C of F construction project that competes for funding.

For safety trouble calls with minimal risk, WICC has two days to respond. For safety trouble calls that appear to be imminent danger to life, limb or equipment, WICC employees must respond within 20 minutes during normal work hours or 4 hours after hours and weekends.

The initial response will validate and verify that the trouble call is truly safety related and then mitigate or abate the safety risk and correct the discrepancy, if it can be accomplished at that time.

If parts or a larger work force are required then the safety hazard will be abated and the job will be scheduled for a later date when materials and manpower are available.

All safety trouble calls are reviewed by the WICC safety manager. Those that are not completed at the end of each month are assessed and assigned a likelihood and consequence risk assessment number.

All open and emergent safety calls are reviewed each month by the WFF Executive Safety Council. The statistics are reviewed that show number of calls received, completed and deferred.

Since September 2003, WICC has recorded 253 safety related trouble calls and completed 252.

Please Obey Speed Limits

All Parking Lots

Main Base

Retirement Planning Workshop - CSRS/FERS

9 a.m. – 4 p.m.
June 16-18, 2004
E-2 Training Room

Description:
This workshop addresses, in depth, considerations necessary for planning a smooth transition into retirement. Topics covered include CSRS/FERS, FEGLI, FEHBP, Disability, Deposit/ Redeposit; TSP, Annual/Sick Leave, Annuity Calculation, Best Date to Retire, COLA's, Survivor Benefits, etc.

You will learn:
· Retirement system benefits

· Life and health insurance, Social Security and Medicare, financial planning

· Legal and estate planning and financial planning for your future

Who Should Attend:
CSRS/FERS (government) employees who are 3 - 5 years from retirement or retirement eligible and their spouse.

For more information on this workshop, visit:
http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=981

Property Awareness

We need you (all users of government equipment) to help stop the loss, theft and abuse of government property.

Please make sure all documents are prepared and approved before you loan, excess, send out for repair, or cannibalize any equipment. For further information or assistance, call Regina Waters at extension 1337.

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found on the NASA Wallops Flight Facility homepage: www.wff.nasa.gov

Editor Betty Flowers